

ACCESSION NUMBER: 2001:544756 CAPLUS
DOCUMENT NUMBER: 135:288979
TITLE: Synthetic flux-promoting polyether models: cation
flux
dependence on polyoxyethylene chain length
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SOURCE: Israel Journal of Chemistry (2000), 40(3-4),
279-288
CODEN: ISJCAT; ISSN: 0021-2148
PUBLISHER: Laser Pages Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel class of cyclic polyoxyethylene derivs. incorporating a
polybenzylated oxane system has been prep'd. via ruthenium-catalyzed
ring-closing metathesis. These polyethers were incorporated into
phospholipid vesicles and shown to facilitate transmembrane sodium
transport. Maximum efficiency in sodium flux occurred when
polyoxygenated

chain lengths were similar to the leaflet thickness in bilayers. It is
proposed that polyethers dimerize in order to function. The assocn.
const. of these polyethers with alkali metal cations and Me ammonium ion
have been evaluated using Cram's picrate extn. method.

IT 364764-67-0P 364764-68-1P 364764-73-8P,
preparation 364764-74-9P, preparation 364764-75-0P,
preparation 364764-76-1P, preparation 364764-77-2P,
preparation 364764-78-3P

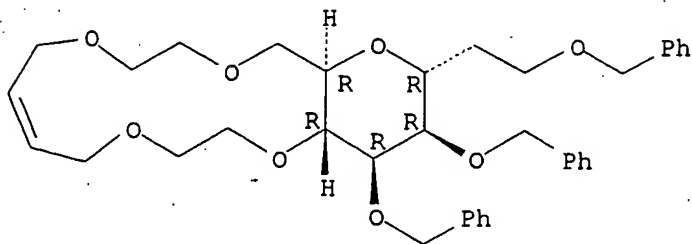
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of cyclic polyoxyethylene derivs. of polybenzylated oxane as
transmembrane sodium transport facilitators in phospholipid vesicles)

RN 364764-67-0 CAPLUS

CN D-glycero-D-manno-Octitol,

2,6-anhydro-1,3-O-[2-butene-1,4-diylbis(oxy-2,1-
ethanediyl)]-7-deoxy-4,5,8-tris-O-(phenylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



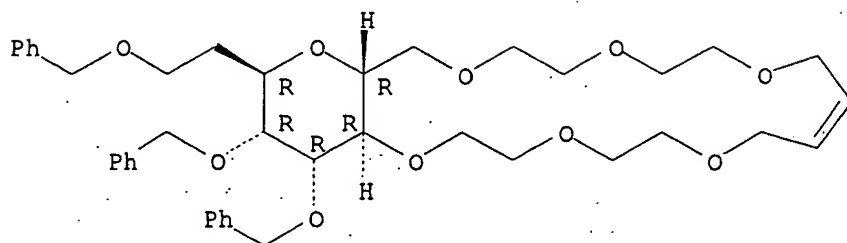
RN 364764-68-1 CAPLUS

CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-
1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



RN 364764-73-8 CAPLUS

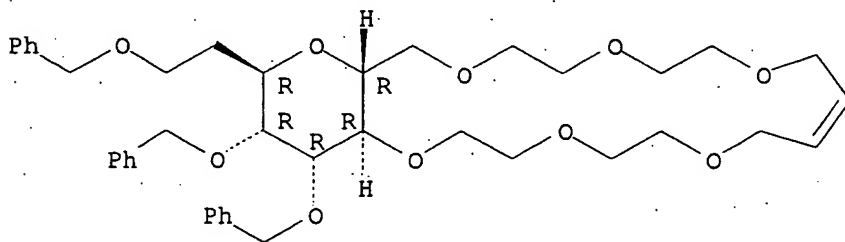
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with lithium ion
(Li1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Li⁺

RN 364764-74-9 CAPLUS

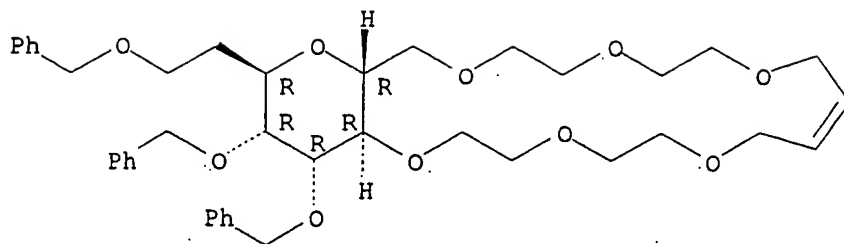
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with sodium ion
(Na1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Na⁺

RN 364764-75-0 CAPLUS

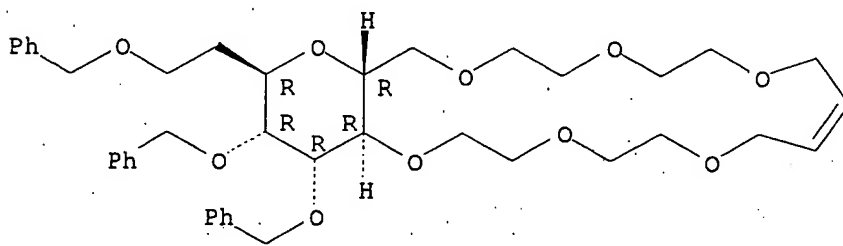
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with potassium
ion (K1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● K⁺

RN 364764-76-1 CAPLUS

CN D-glycero-D-manno-Octitol,

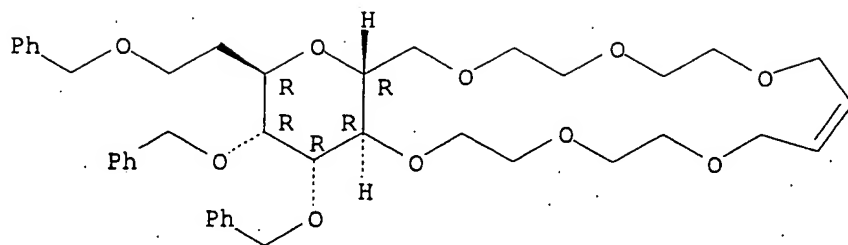
2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with rubidium
ion

(Rb1+) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Rb⁺

RN 364764-77-2 CAPLUS

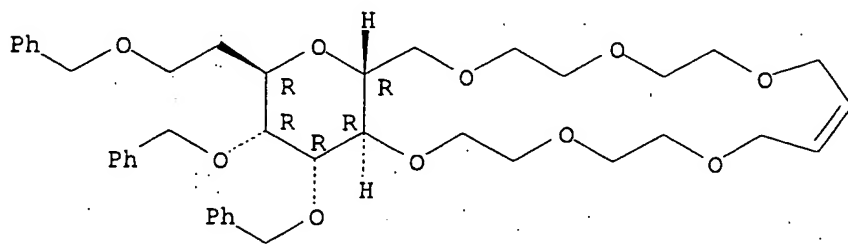
CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with cesium ion
(Cs⁺) (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



● Cs⁺

RN 364764-78-3 CAPLUS

CN D-glycero-D-manno-Octitol,

2,6-anhydro-7-deoxy-4,5,8-tris-O-(phenylmethyl)-

1,3-O-3,6,11,14-tetraoxahexadec-8-ene-1,16-diyl-, compd. with methanamine
(1:1) (9CI) (CA INDEX NAME)

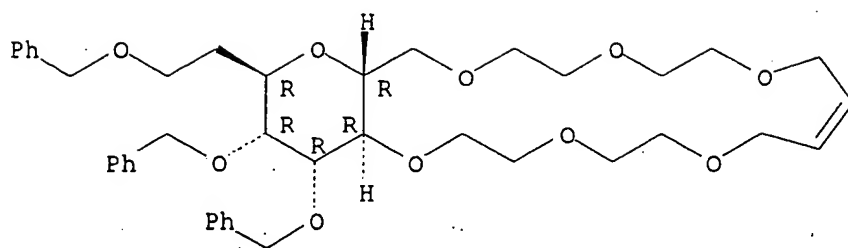
CM 1

CRN 364764-68-1

CMF C41 H54 O10

Absolute stereochemistry.

Double bond geometry unknown.



CM 2

CRN 74-89-5
CMF C H5 N

H₃C-NH₂